

SBIR Phase I:NIFUT Technology for recycling fluorides from Uranium Tetrafluoride

Award Information

Agency:
National Science Foundation

Branch

n/a
Amount:
\$180,000.00

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2010
Program:
SBIR

Phase:

Phase I
Contract:
1013198

Agency Tracking Number:

1013198
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n/a

Solicitation Topic Code:

CT8
Solicitation Number:
n/a
Small Business Information

Pearlhill Technologies

616 S Adam Ln, Idaho Falls, ID, 83401

Hubzone Owned:
N

Socially and Economically Disadvantaged:

N
Woman Owned:
N

Duns:

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Abstract

This SBIR Phase I project will develop a program to utilize uranium tetrafluoride (DUF4), a processed byproduct from the creation of nuclear energy, to create SF4, SF6, and NF3. SF4 and SF6 would be created by mixing DUF4 with sulfur oxides and halides (and oxygen for SF6) at varying temperatures, pressures, and stoichiometries. In addition, the generated SF4 would be mixed at varying temperatures, pressures, and stoichiometries with NOF to try to create NF3. A two-step process to create NF3 with SF4, NH3, and fluorine will also be performed. The broader/commercial impact of the project will be the expansion of a market for nuclear waste by-products that is currently insufficient to utilize the existing supply of nuclear waste. By expanding the market, the potential to expand the nuclear power industry might be more palatable.

* information listed above is at the time of submission.